

What is claimed is :

1. A method for preparing carbon nanotube from a liquid phased-carbon source, wherein the method uses a liquid phased-hydrocarbon based material as carbon source; and comprises the steps of
5 heating and pressurizing said carbon source to the range of critical temperature and critical pressure, and
reacting and cooling said carbon source in the presence of a metal seed catalyst to induce the growth of carbon nanotube.
10
2. The method of claim 1, wherein said metal seed catalyst is selected from the group consisting of a metal nanoparticle, a metal complex and a metal compound capable of spontaneously generating a seed during the reaction.
- 15 3. The method of claim 2, wherein said metal is at least one metal complex selected from the group consisting of a transition metal such as cobalt, nickel and iron; and a noble metal such as platinum and palladium.
4. The method of claim 1, wherein said hydrocarbon based material is used in
20 the amount of from 80 to 99.999 wt%, while said metal seed catalyst is used in the amount of from 0.001 to 20 wt%.
5. The method of claim 1, wherein said hydrocarbon based material is at least one hydrocarbon selected from the group consisting of a saturated hydrocarbon, an
25 unsaturated hydrocarbon, an aromatic hydrocarbon and a derivative thereof.
6. The method of claim 1, wherein said reaction temperature maintaining the

critical state of said carbon source is ranging from 200 to 800°C.

7. The method of claim 1, wherein said reaction pressure maintaining the critical state of carbon source is ranging from 1 to 400 atm.

5

8. The method of claim 1, wherein said critical state equilibrating between liquid and gas phases is maintained for 1 min to 30 hrs.

9. The method of claim 1, wherein said heating and cooling rate are regulated
10 within the range of from 0.01 to 50°C/min.

10. The method of claim 9, wherein said heating rate is regulated within the range of from 1 to 30°C/min, and said cooling rate is regulated within the range of from 1 to 30°C/min.